

IN THE CLAIMS:

The text of all pending claims are set forth below. Cancelled and withdrawn claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (previously amended), (cancelled), (withdrawn), (new), (previously added), (reinstated - formerly claim #), (previously reinstated), (re-presented - formerly dependent claim #) or, (previously re-presented).

Please AMEND the claims in accordance with the following:

1. (currently amended) A path setting device to secure for a subscriber bandwidth for a plurality of paths that are to be used together to carry data to provide an application service from a service provider to the subscriber, comprising:

means for determining whether a received message is a request message for a first path of the plurality of paths, the request message including first bandwidth information for the first path of the plurality of paths and second bandwidth information for a second path of two or more paths of the plurality of paths used for carrying the data of the application service required by the subscriber; and

means for securing the plurality of paths and a bandwidth for the plurality of paths based on the bandwidth information of the two or more paths in the request message for the first path between the service provider and the subscriber, where the securing is in response to receiving the request message for the first path.

2. (original) A path setting device as recited in claim 1, further comprising:

means for calculating a bandwidth required for all paths set to provide the service for a subscriber based on the requested bandwidth information set in the request message for the first path from the subscriber;

means for comparing the calculated bandwidth to an available bandwidth between the service provider and the subscriber;

means for securing the calculated bandwidth if the calculated bandwidth is less than or equal to the available bandwidth;

means for setting the first path between the service provider and the subscriber in response to the request message for the first path; and

means for notifying that it is impossible to set a path to the subscriber if the calculated bandwidth is larger than the available bandwidth.

3. (original) A path setting device as recited in claim 1, further comprising:

means for determining whether the received message is a following request message for a remaining path in which information identifying the request message for the first path is set; and

means for setting the remaining path between the service provider and the subscriber in response to the following request message for the remaining path.

4. (original) A path setting device as recited in claim 3, wherein the information identifying the request message is a call number.

5. (original) A switching system as recited in claim 2, further comprising

means for determining whether the received message is a following request message for a remaining path in which information identifying the request message for the first path is set; and


means for setting the remaining path between the service provider and the subscriber in response to the following request message for the remaining path.

6. (original) A path setting device as recited in claim 5, wherein the information identifying the request message is a call number.

7. (currently amended) A path setting control method of securing for a subscriber bandwidth for a plurality of paths that are to be used together to carry data to provide an application service from a service provider to the subscriber via a switching system, comprising:

sending a request message for a first path of the plurality of paths from the subscriber to the switching system, ~~the~~ a request message including first bandwidth information for the first path ~~of the plurality of paths~~ and second bandwidth information for a second path of two or more paths of the plurality of paths used to carry the data and to thereby provide the application service for the subscriber; and

securing the plurality of paths and a bandwidth for the plurality of paths based on the bandwidth information of the two or more paths in the request message for the first path between the service provider and the subscriber, where the securing is in response to the request message for the first path being received at the switching system.



8. (original) A path setting control method as recited in claim 7, further comprising:
setting the first path in response to the request message for the first path between the service provider and the subscriber; and

setting a remaining path in response to the following request message for the remaining path between the service provider and the subscriber.

9. (currently amended) A switching system for setting for a subscriber a plurality of paths that are to be used together to carry data to provide an application service provided from a service provider to the subscriber, comprising:

an extraction device to extract messages from subscribers;

a message determination device to determine whether a message extracted by the message extraction device is a request message for a first path of two or more paths of the plurality of paths between the service provider and the subscriber, the request message including first bandwidth information for the first path ~~of the plurality of paths~~ and second bandwidth information for a second path of the plurality of paths for carrying the data of the application service; and

a bandwidth securing and processing device to secure the plurality of paths and a bandwidth for the plurality of paths based on the bandwidth information of the two or more paths in the request message in response to receiving the request message for the first path.

10. (original) A switching system as recited in claim 9, further comprising:
a presumed bandwidth calculating device to calculate a presumed bandwidth for each

respective path based on the requested bandwidth information set in the request message, and to calculate a total presumed bandwidth based on the presumed bandwidths.

11. (original) A switching system as recited in claim 9, wherein said bandwidth securing and processing device compares the bandwidth to the available bandwidth, and secures the bandwidth when the bandwidth is less than or equal to the available bandwidth.

12. (original) A switching system as recited in claim 10, wherein said bandwidth securing and processing device compares the total presumed bandwidth to the available bandwidth, and secures the total presumed bandwidth when the total presumed bandwidth is less than or equal to the available bandwidth.

13. (currently amended) A path setting device to secure for a subscriber bandwidth for a plurality of paths that are to be used together to carry data to provide an application service from a service provider to the subscriber, comprising:

means for determining whether a received message is a request message for a first path of the plurality of paths;

means for determining whether a number of request messages received for the application service from the same subscriber reaches a number of paths indicated by the request message for the first path; and

means for securing at ~~the~~ a switching system a bandwidth required for all of the paths in the plurality of paths to provide the application service for the subscriber between the service provider and the subscriber when the number of request messages received from the same subscriber reaches the number of paths indicated by the request message for the first path.

14. (previously presented) A path setting control method of securing for a subscriber bandwidth for a plurality of paths that are to be used together to carry data to provide an application service from a service provider to the subscriber via a switching system, comprising:

sending a request message for a first path of the plurality of paths from the subscriber to the switching system, where a number of paths required to provide the application service for the subscriber is determined;

sending as many request messages for the application service as the number of paths successively from the subscriber to the switching system; and

securing at the switching system the bandwidth required for all of the paths in the plurality to provide the application service for the subscriber between the service provider and the subscriber when the number of request messages reaches the number of paths determined according to the request message for the first path.

15. (original) A service provider to provide a service by using multiple paths to a subscriber via a switching system, comprising;

means for receiving a request message for a first path from the subscriber via the switching system;

means for securing a bandwidth of all the multiple paths required to provide the service for a subscriber in response to receiving the request message for the first path;

means for sending a connection message to the switching system in response to receiving the request message for the first path after securing the bandwidth; and

means for sending the connection message to the switching system in response to receiving a following request message for another path from the subscriber.

16. (currently amended) A path setting control method of setting multiple paths for an application service provided from a service provider to a subscriber via a switching system, comprising:

sending a request message from the subscriber to the switching system to set, in order of large bandwidth to small bandwidth, various bandwidths which correspond to the ~~plurality of~~ multiple paths required to provide the application service; and

securing the bandwidths required between the service provider and the subscriber in order of large bandwidth to small bandwidth in response to the request message.

17. (original) A subscriber terminal in a network which is provided a service via a switching system using multiple paths from a service provider, comprising:

a path selecting device to select an unconnected path having a bandwidth which is largest among paths to provide a requested service;

a message transmitting device to transmit a request message to set the path selected by said path selecting device to the switching system; and

a received message processing device to determine whether there are any paths which have to be set, and to instruct the path selecting device to select the path having the largest bandwidth among the remaining paths to provide the service when there is any path which has to be set.

18. (cancelled).

19. (cancelled).

20. (previously presented) A method according to claim 16, wherein a channel type corresponds to a type of service provided by a channel of the path.

21. (currently amended) A method of using a switching system to obtain, for a subscriber of a service provider, communication paths that together provide a given session of a type of application service provided by one or more servers of the service provider, where the type of application service is predefined to require multiple paths, the method comprising:

when initiating the given session, transmitting from a subscriber terminal a request for a first communication path corresponding to a first of the paths that are predefined to be required to provide the type of application service of the given session; and

receiving the request at a switching system and in response, based on the request, securing both the first communication path and a second communication path for the given session, where the second communication path corresponds to a second of the paths that are predefined to be required to provide the type of application service of the given session.

22. (previously presented) A method according to claim 21, wherein the application service comprises a video on demand service, wherein the predefined paths comprise at least a media path and a control path, wherein the media path carries media data of the given session, and wherein the control path carries control data that controls the given session.

23. (new) A method according to claim 21, wherein the second communication path is secured by the switching system before the switching system receives from the service provider a response to the request for the first communication path or before the switching system receives from the subscriber a second request that is a request for the secured communication path.
